FM Translator W238AW FI 142981

Tower Above Media LLC

PO Box 2112

Easley, SC 29641-2112

This technical narrative and exhibits were prepared for Tower Above Media LLC, Licensee of W238AW Facility ID 142981, West View, SC. Tower Above Media LLC is filing a minor mod application for proposed operation on non-adjacent channel 225 from an existing tower, ASR 1052124.

W238AW will continue to be used as a fill-in translator for WLFJ-FM, Facility ID 54856, Greenville SC and will rebroadcast the HD3 digital channel of WLFJ-FM. Tower Above Media LLC has written permission to rebroadcast WLFJ-FM. The modified W238AW will operated on Channel 225 with a directional antenna 90 meters above ground and 250 watts ERP.

A FM channel study was made with Radio Soft ComStudy 2.2 to determine a usable channel. Section 74.1204 contour protection exhibits are included to demonstrate protection to other nearby broadcast facilities.

This application includes a request for non-adjacent channel change.

Non-Adjacent Channel Displacement Change Request

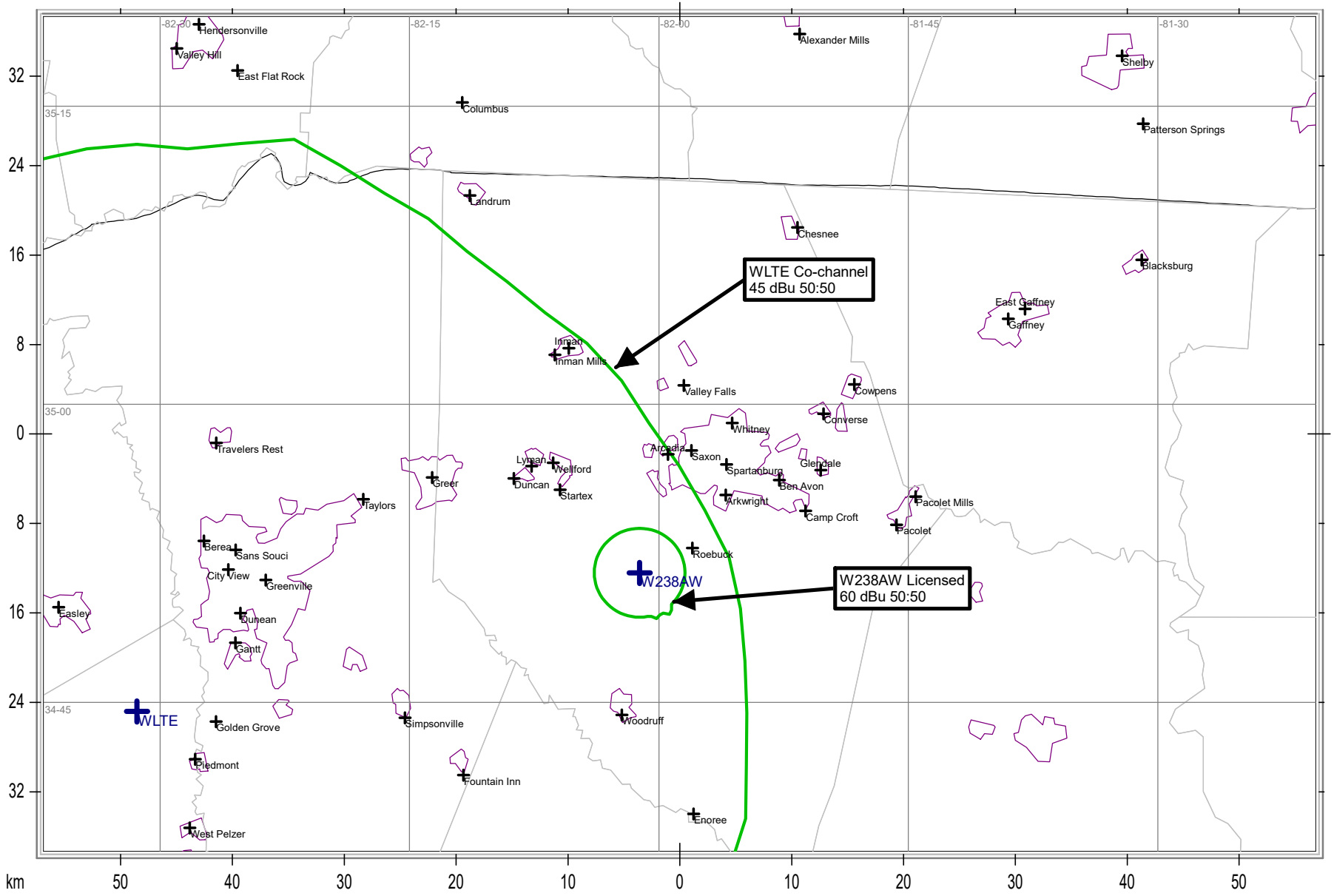
Tower Above Media LLC, is seeking non-adjacent Channel 225D (92.9 MHz).

In FCC 1940 MB Docket No. 18-119 released May 9, 2019, the Commissions adopted changes to Section 74.1233(a)(1) which allows an FM translator to change to any available same-band FM channel as a minor change, upon a showing of actual or predicted interference to or from any other broadcast station. The standard established in this policy requires overlap between the FCC F(50,50) 60 dBu contours and the FCC F(50,50) 45 dBu contours of a co-channel or first adjacent channel FM station.

On July 11, 2023 WLET (FM) filed a license application for a change of location and frequency from channel 240A to channel 238A, which is now co-channel with W238AW. The map included with this exhibit demonstrates that the 45 dBu contour of co-channel full power FM station WLTE (FM), Channel 238A, Powdersville, SC does overlap the FCC F(50,50) 60 dbu contour of the W238AW licensed facility

Therefore, it is believed that the proposed W238AW non-adjacent channel change meets the requirements established in FCC 1940 MB Docket No. 18-119.

WLTE Ch238 45 dBu 50:50 overlap with W238AW 60 dBu 50:50



Tower Above Media LLC
P O Box 2112
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Channel Spacing Report for Channel 225
West View, SC

ComStudy 2.2 search of channel 225 (92.9 MHz Class D)
at 34-58-52.4 N, 81-59-10.0 W.

CALL	CITY	ST	CHN	CL	DIST	SEP	BRNG	CLEARANCE
WTPT	FOREST CITY	NC	227	C	39.35	0.00	325.3	-24.46 dB*a
WESC-FM	GREENVILLE	SC	223	C	59.37	0.00	287.3	-17.31 dB*b
W225AZ	GREENVILLE	SC	225	D	39.08	0.00	263.5	-14.87 dB*c
WESC-FM	GREENVILLE	SC	223	C	45.21	0.00	256.6	-8.70 dB* Aux
WESC-FM	GREENVILLE	SC	223	C	57.91	0.00	297.8	-4.16 dB* Aux
W225DL	CHERRYVILLE	NC	225	D	70.45	0.00	66.4	-4.49 dB*d
WESC-FM	GREENVILLE	SC	223	C	57.93	0.00	297.8	-4.13 dB* Aux
WZLA-FM	ABBEVILLE	SC	225	A	93.40	0.00	199.4	15.18 dB
W225CJ	ASHEVILLE	NC	225	D	88.60	0.00	320.8	15.95 dB
WZGC	ATLANTA	GA	225	D	255.03	0.00	238.4	22.13 dB
W225BD	STATESVILLE	NC	225	D	136.75	0.00	48.3	22.68 dB
WSEQ-LP	HUDSON	NC	225	LP100	105.11	24.00	27.3	25.37 dB
WRHJ-LP	ROCK HILL	SC	226	LP100	92.38	13.00	94.9	26.44 dB
W226BY	TOCCOA	GA	226	D	133.23	0.00	252.3	28.86 dB
WEGX	DILLON	SC	225	C	253.44	0.00	104.9	28.31 dB
WFNZ-FM	HARRISBURG	NC	224	C3	115.91	0.00	73.4	28.42 dB
W225AA	BOONE	NC	225	D	141.48	0.00	10.4	29.53 dB

***a See attached exhibit showing protection of WTPT from Interference.**

***b See attached exhibit showing protection of WESC-FM from Interference.**

***C Incoming interference to this application From W225AZ, see attached contour map showing no out going interference to W225AZ**

***d Incoming interference to this application from W225DL, see attached contour map showing no out going interference to W225DL**

- **Aux – Auxiliary transmit antennas system for WESC-FM**

COMPLIANCE, SECTION 74.1204

The channel spacing report shows that the proposed Facility is in compliance with 74.1204(a) regarding protection of all other stations except WESC-FM and WTPT.

The proposed FM translator on channel 225 is located within the protected 60 dbu contour of station WESC-FM on second adjacent channel 223, Greenville SC and WTPT on second adjacent channel 227, Forrest City, NC The attached exhibits will demonstrate that there is a lack of population in the area of possible interference to WESC-FM and WTPT by means of a “Living Way” showing of a signal strength ratio analysis of 40 db or more and meets the requirement of 74.1204(d)

The predicted F (50-50) field strength of WESC-FM at the proposed translator site is 76 dBu or greater. Therefore, the respective interfering contour generated by the proposed FM Translator site is 116 dBu whitch extends 176 meters from the transmit antenna in the horizontal plane and shorter distances at lower elevation angels. Tower Above Media LLC proposes to use a single bay Nicom BLK5 vertical polarized transmit antenna mounted 90 Meters above ground level. Attached is a spreadsheet calculating the predicted signal lever at ground level and at a safety plane 5 meters above ground of 113.74 dBu or less. The area of potential interference does not reach ground level or any likely receiver location

The predicted F (50-50) field strength of WTPT at the proposed translator site is 83 dBu or greater. Therefore, the respective interfering contour generated by the proposed FM Translator site is 123 dBu and extends 79 meters from the transmit antenna in the horizontal plane and shorter distances at lower elevation angels. Tower Above Media LLC proposes to use a single bay Nicom BLK5 vertical polarized transmit antenna mounted 90 Meters above ground level. Attached is a spreadsheet calculating the predicted signal lever at ground level and at a safety plane 5 meters above ground of 113.74 dBu or less. The area of potential interference does not reach ground level or any likely receiver location

The proposed site is the non-directional AM broadcast tower for WORD. The area is open field and industrial buildings. See attached aerial photo showing the area.

Therefore, it is believed the proposed facility on Channel 225 is in compliance with 74.1204(d) based on no population within the area of predicted interference.

Should any actual interference occur, then Licensee will promptly suspend operation of this translator in accordance with 47 C.F.R. 74.1203.

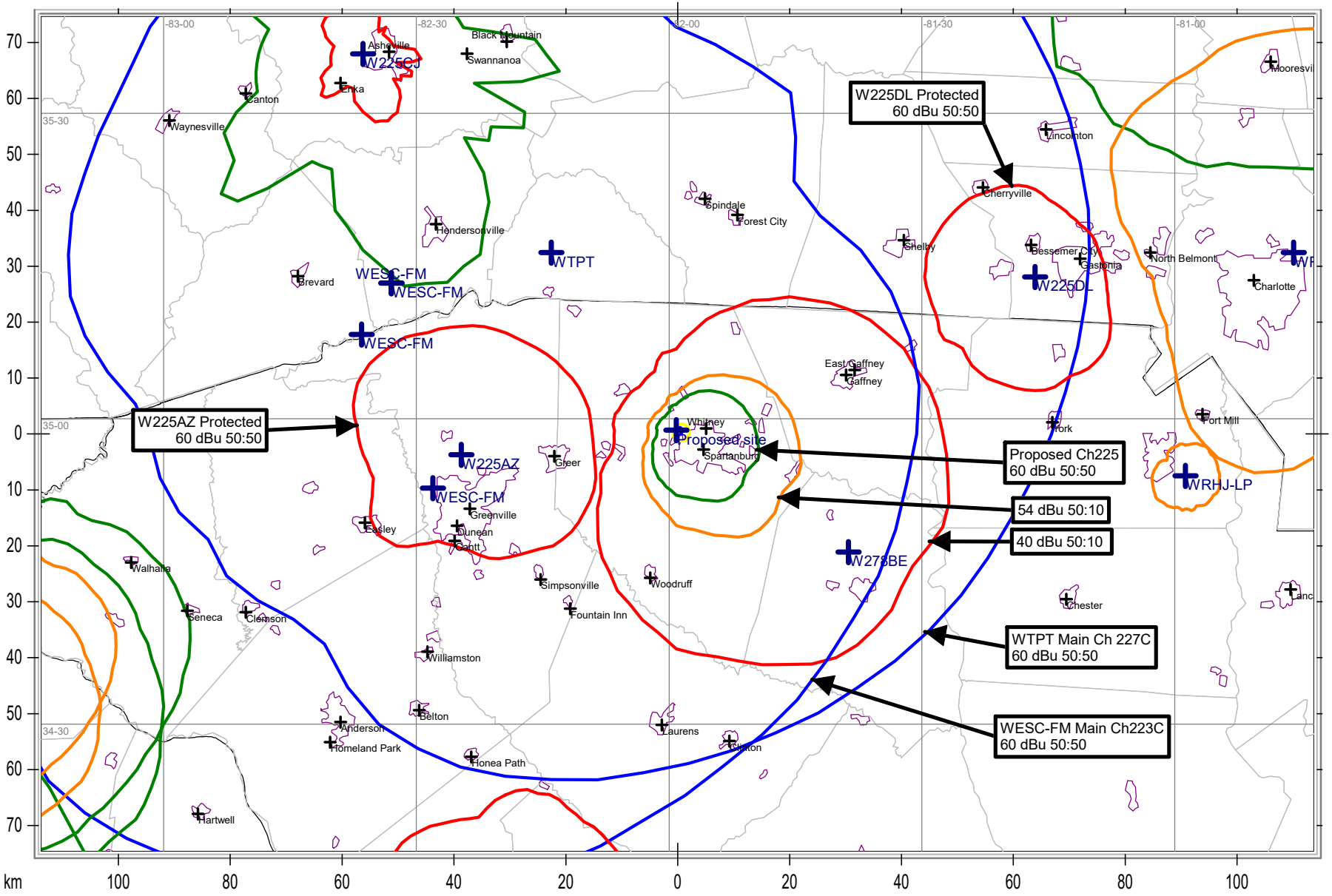
Environmental and RF Exposure Compliance

The proposed translator site is on an existing tower with other communication facilities and will not involve any new construction.

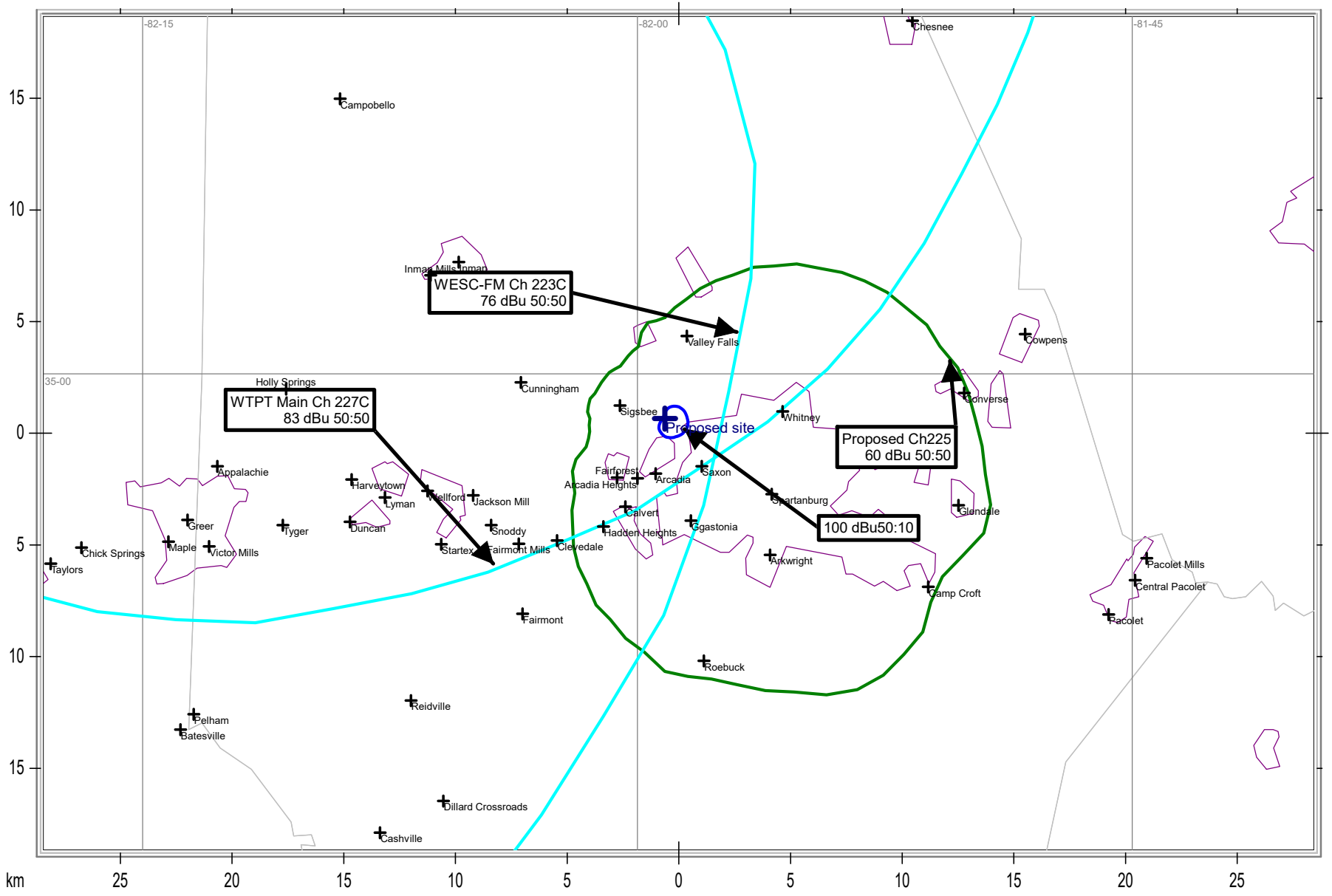
A study was done with the EPA FM Model computer program to determine how much RF radiation this application will contribute to the site. Based on the power, antenna type and height, this facility will generate less than 1.03 uw/cm2 at 2 meters above ground. The limit for uncontrolled public exposure is 200 uw/cm2, therefore, this facility will contribute less than 1% of the MPE limit for general population/uncontrolled exposure. The tower is gated and not accessible by the general population.

Based on this analysis, this application appears to be in compliance with FCC guidelines for human exposure to radiofrequency electromagnetic fields.

W238AW Contours on Ch 225D at ASR 1052124

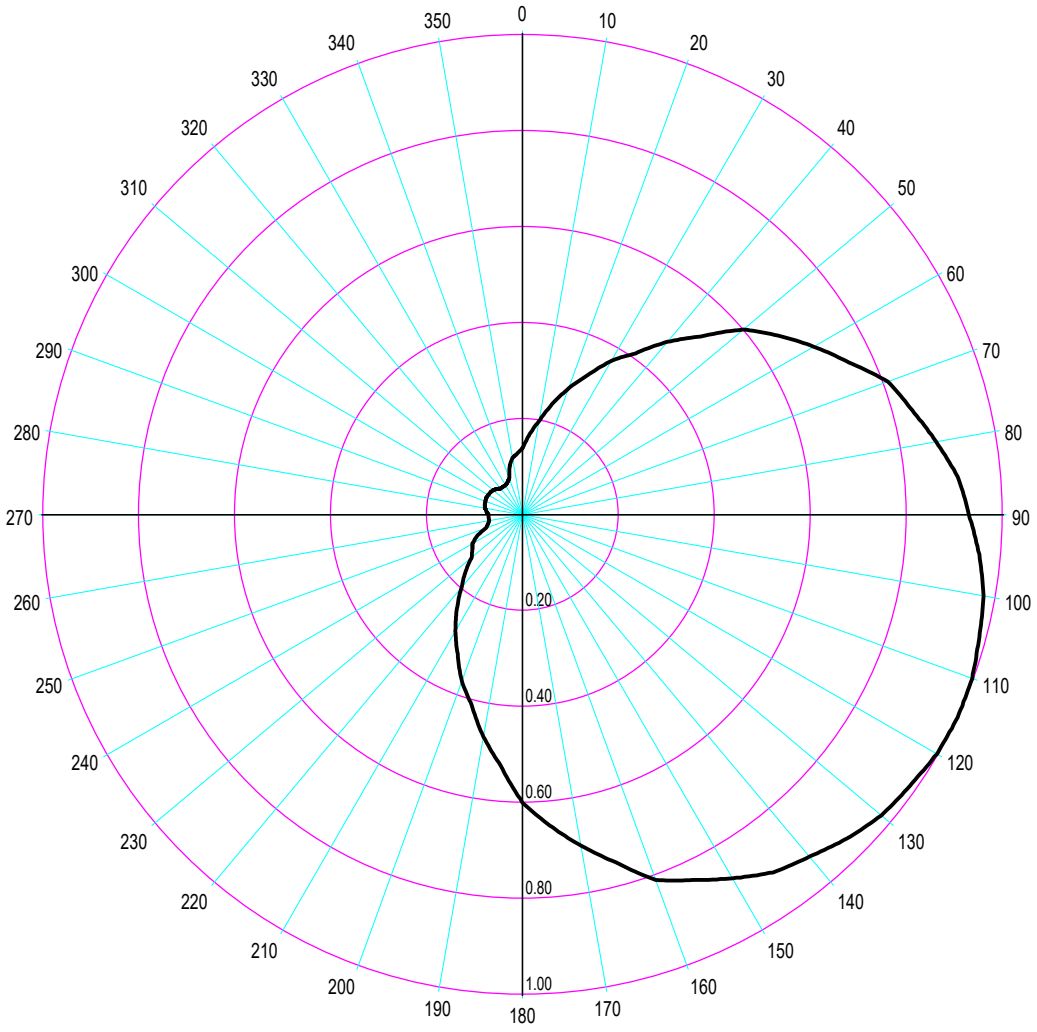


Proposed Ch225 vs WESC and WTPT Contour Protection



Proposed Antenna:	Nicom BLK5 Ver Pol Single Bay	
Proposed Power:	0.25 kW	Fill in "yellow" cells
Antenna Height AGL:	90 meters	
Interference Contour:	116 dBu f(50:10)	
Artificial Rcv Antenna Height:	5 meters	
Distance (Free Space) Equation:	=(10^((106.92-[desired dBu]+[ERP in dBk])/20))*1000	
Field Strength (dBu) Equation	"=106.92-(20*(LOG10[DistMeters]/1000)))+[ERPin dBk]	

Depression Angle Below Horizon	Antenna Relative Field	ERP in kW	ERP in dBk	Distance from Ant. to Interf Contour	Distance from Ant. to Artificial Plane	Field Strength in dBu @ Artificial Plane	Distance from Ant. to Ground Level	Field Strength in dBu @ Ground Level
0°	1.000	0.250	-6.02	175.78 m	infinite	---	infinite	---
-5°	0.997	0.249	-6.05	175.25 m	975.27 m	101.09 dBu	1032.63 m	100.59 dBu
-10°	0.985	0.243	-6.15	173.14 m	489.50 m	106.97 dBu	518.29 m	106.48 dBu
-15°	0.910	0.207	-6.84	159.96 m	328.41 m	109.75 dBu	347.73 m	109.26 dBu
-20°	0.860	0.185	-7.33	151.17 m	248.52 m	111.68 dBu	263.14 m	111.19 dBu
-25°	0.800	0.160	-7.96	140.62 m	201.13 m	112.89 dBu	212.96 m	112.40 dBu
-30°	0.730	0.133	-8.75	128.32 m	170.00 m	113.56 dBu	180.00 m	113.06 dBu
-35°	0.650	0.106	-9.76	114.26 m	148.19 m	113.74 dBu	156.91 m	113.24 dBu
-40°	0.550	0.076	-11.21	96.68 m	132.24 m	113.28 dBu	140.02 m	112.78 dBu
-45°	0.450	0.051	-12.96	79.10 m	120.21 m	112.36 dBu	127.28 m	111.87 dBu
-50°	0.350	0.031	-15.14	61.52 m	110.96 m	110.88 dBu	117.49 m	110.38 dBu
-55°	0.270	0.018	-17.39	47.46 m	103.77 m	109.21 dBu	109.87 m	108.71 dBu
-60°	0.220	0.012	-19.17	38.67 m	98.15 m	107.91 dBu	103.92 m	107.41 dBu
-65°	0.180	0.008	-20.92	31.64 m	93.79 m	106.56 dBu	99.30 m	106.07 dBu
-70°	0.120	0.004	-24.44	21.09 m	90.46 m	103.35 dBu	95.78 m	102.86 dBu
-75°	0.080	0.002	-27.96	14.06 m	88.00 m	100.07 dBu	93.17 m	99.58 dBu
-80°	0.050	0.001	-32.04	8.79 m	86.31 m	96.16 dBu	91.39 m	95.66 dBu
-85°	0.050	0.001	-32.04	8.79 m	85.32 m	96.26 dBu	90.34 m	95.76 dBu
-90°	0.050	0.001	-32.04	8.79 m	85.00 m	96.29 dBu	90.00 m	95.79 dBu

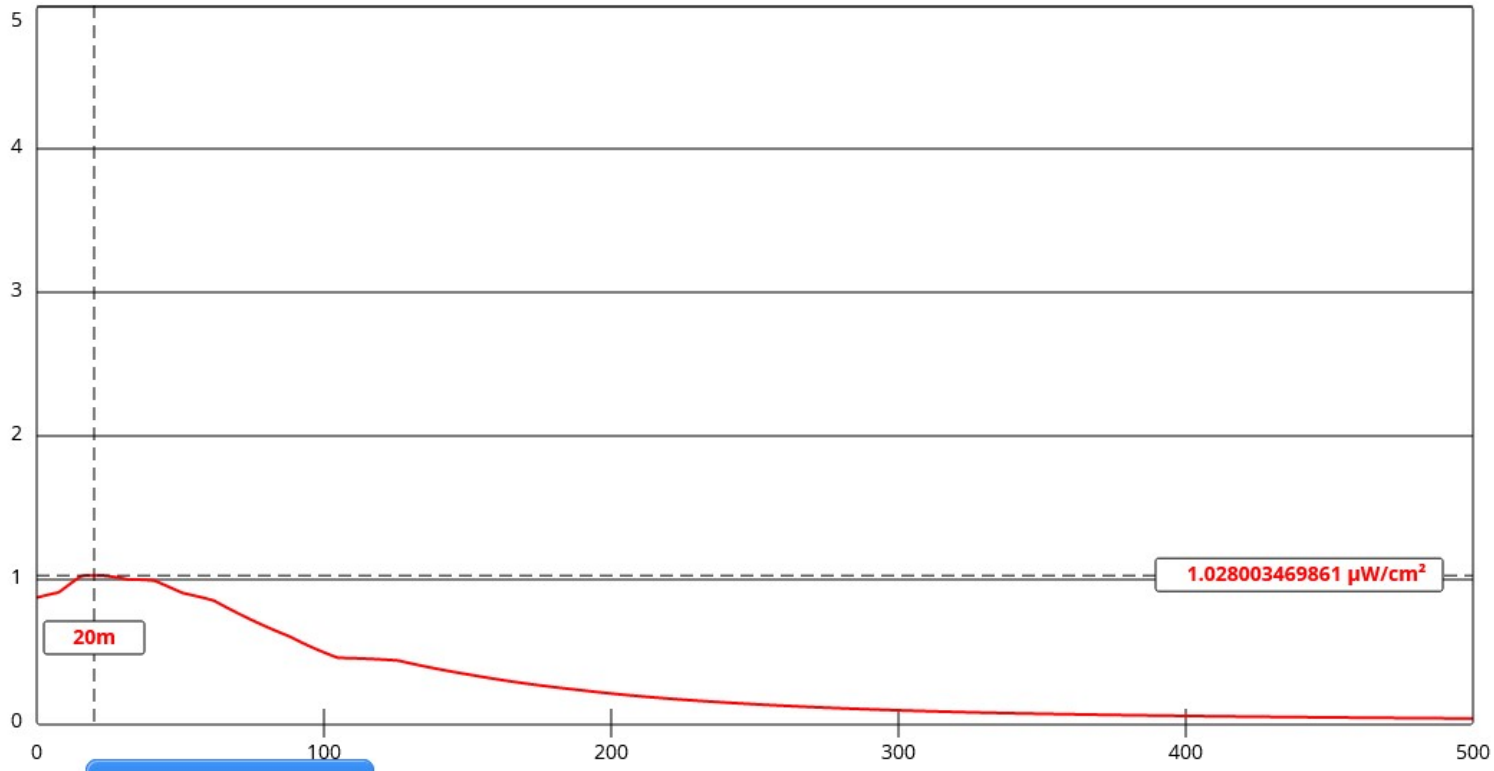


Azim	Rel.FS	ERP [W]	dBk
0.0	0.139	4.830	-23.160
5.0	0.168	7.056	-21.514
10.0	0.198	9.801	-20.087
15.0	0.239	14.280	-18.453
20.0	0.280	19.600	-17.077
25.0	0.320	25.600	-15.918
30.0	0.370	34.225	-14.657
35.0	0.410	42.025	-13.765
40.0	0.470	55.225	-12.579
45.0	0.525	68.906	-11.617
50.0	0.600	90.000	-10.458
55.0	0.650	105.625	-9.762
60.0	0.700	122.500	-9.119
65.0	0.750	140.625	-8.519
70.0	0.810	164.025	-7.851
75.0	0.840	176.400	-7.535
80.0	0.875	191.406	-7.180
85.0	0.910	207.025	-6.840
90.0	0.930	216.225	-6.651
95.0	0.955	228.006	-6.421
100.0	0.975	237.656	-6.241
105.0	0.985	242.556	-6.152
110.0	0.997	248.502	-6.047
115.0	1.000	250.000	-6.021
120.0	0.997	248.502	-6.047
125.0	0.985	242.556	-6.152
130.0	0.975	237.656	-6.241
135.0	0.955	228.006	-6.421
140.0	0.930	216.225	-6.651
145.0	0.910	207.025	-6.840
150.0	0.875	191.406	-7.180
155.0	0.840	176.400	-7.535
160.0	0.810	164.025	-7.851
165.0	0.750	140.625	-8.519
170.0	0.700	122.500	-9.119
175.0	0.650	105.625	-9.762
180.0	0.600	90.000	-10.458

Azim	Rel.FS	ERP [W]	dBk
185.0	0.525	68.906	-11.617
190.0	0.470	55.225	-12.579
195.0	0.410	42.025	-13.765
200.0	0.370	34.225	-14.657
205.0	0.320	25.600	-15.918
210.0	0.280	19.600	-17.077
215.0	0.239	14.280	-18.453
220.0	0.198	9.801	-20.087
225.0	0.168	7.056	-21.514
230.0	0.139	4.830	-23.160
235.0	0.128	4.096	-23.876
240.0	0.121	3.660	-24.365
245.0	0.105	2.756	-25.597
250.0	0.081	1.640	-27.851
255.0	0.075	1.406	-28.519
260.0	0.071	1.260	-28.995
265.0	0.071	1.260	-28.995
270.0	0.071	1.260	-28.995
275.0	0.076	1.444	-28.404
280.0	0.080	1.600	-27.959
285.0	0.082	1.681	-27.744
290.0	0.083	1.722	-27.639
295.0	0.084	1.764	-27.535
300.0	0.083	1.722	-27.639
305.0	0.082	1.681	-27.744
310.0	0.080	1.600	-27.959
315.0	0.076	1.444	-28.404
320.0	0.071	1.260	-28.995
325.0	0.071	1.260	-28.995
330.0	0.071	1.260	-28.995
335.0	0.075	1.406	-28.519
340.0	0.081	1.640	-27.851
345.0	0.105	2.756	-25.597
350.0	0.121	3.660	-24.365
355.0	0.128	4.096	-23.876


Cavell, Mertz & Associates
Viaduct Rd
Viaduct Rd
1052122
1052123
1052124
Proposed W238AW site
N34°58'52.32"
W 81°58'58.08"
Broadcast Dr
621 ft

The FM Model calculator determines the potential exposure from radiofrequency (RF) electromagnetic fields produced by FM broadcast station antennas at ground level. The FM Model software was originally developed by the FCC in 1997 as a standalone executable program and this improved version provides more precise predictions and runs via a JavaScript enabled web browser. The FM Model is originally based on measured data published in 1985 by the EPA.
Show More....



View Tabular Results +

Channel Selection	Channel 225 (92.9 MHz)		
Antenna Type +	EPA Type 1: Ring-and-Stub or "Other"		
Height (m)	90	Distance (m)	500
ERP-H (W)	0	ERP-V (W)	250
Num of Elements	1	λ	1
Num of Points	500	Apply	

Licensed and Proposed 60 dBu contour overlap